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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|-------------------------------|------------------|
| 10/728,526 | 12/05/2003 | Stephen J. Kramer | 2269-4371.1US (00-0118.01) | 8284 |
| 24247 | 7590 | 10/19/2005 | EXAMINER | |
| TRASK BRITT P.O. BOX 2550 SALT LAKE CITY, UT 84110 | | | MCDONALD, SHANTESE L | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 3723 | |

DATE MAILED: 10/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|---|---|--|
| Office Action Summary | Application No. 10/728,526 | Applicant(s) KRAMER, STEPHEN J. | |
| | Examiner Shantese L. McDonald | Art Unit 3723 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1-7,9,11,12 and 14-23 is/are rejected.
- 7) ☐ Claim(s) 8,10,13 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-7,9,11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Klun in view of Zimmer et al.

Klun et al. teaches a method for fabricating an apparatus for conditioning a polishing pad comprising, providing a quantity of an abrasive material, (col. 18, lines 51-55), which are abrasive particles having a dimension of about 25 to 500 μm , (col. 18, lines 64-67), that is degradable or dissolvable by at least one chemical that does not substantially degrade or dissolve a material of a polishing pad to be conditioned, and forming a conditioning surface, by providing a substrate that comprises at least one of a polymer, a metal, a ceramic, paper, a paper-like material or a fabric, (col. 17, lines 54-59). Klun et al. also teaches at least partially impregnating the supporting substrate with the abrasive particles, by disposing at least some of the abrasive particles adjacent the conditioning surface, completely embedding at least some of the abrasive particles within the supporting substrate, and the conditioning surface comprising a pattern of abrasive material, (col. 17, line 1- col. 18, line 67). Klun teaches all the limitations of the claims except for the abrasive elements being configured to condition a polishing pad for use in a semiconductor device. Zimmer et al. teaches abrasive elements being

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configured to condition a polishing pad for use in a semiconductor device, (col. 3, line 61 – col. 4, line 6). It would have been obvious to one having ordinary skill in the art at the time the invention was made, to utilize the abrasive element of Klun, to condition a polishing pad, as taught by Zimmer, in order to more effectively condition the polishing pad.

Claims 14-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Klun as modified by Zimmer et al., in further view of Bange et al.

Klun et al. as modified by Zimmer et al.

teaches all the limitations of the claims except for the abrasive material comprises providing a quantity of at least one of silicon dioxide, iron, an iron alloy, copper, nickel, and tungsten, securing linear filaments in substantially parallel relation to one another, comprising an abrasive material, in a ductile material to the supporting substrate, and forming a brush. Bange et al. teaches providing an abrasive material that comprises a quantity of and iron alloy, (col. 18, line 1), securing linear filaments in substantially parallel relation to one another, comprising an abrasive material, in a ductile material to the supporting substrate, and forming a brush, (col. 18, line 27 – col. 19, line 55). It would have been obvious to one having ordinary skill in the art at the time the invention was made, to provide method of Klun et al. as modified by Zimmer et al., with abrasive filaments, as taught by Bange et al, in order to provide various forms of conditioning elements.

Allowable Subject Matter

Claims 8, 10 and 13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

Applicant's arguments filed 10/3/05 have been fully considered but they are not persuasive.

The Applicant argues that the combination of Klun and Zimmer et al. is improper hindsight reconstruction. The Examiner notes that the Klun reference teaches making an abrasive article out of quartz, and based upon the Applicant's specification, quartz (pg. 7 pp 0030), is listed as an abrasive material that is degradable or dissolvable by at least one chemical that does not degrade or dissolve a material of the polishing pad. The Zimmer reference is cited to show that an abrasive article can be used to condition a polishing pad. The Klun reference teaches the making of an abrasive article, and it is a well known fact that abrasive articles are used to abrade various things, including polishing pads, therefore the Zimmer reference was combined to show a teaching of using an abrasive article to condition a polishing pad.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shantese L. McDonald whose telephone number is (571) 272-4486. The examiner can normally be reached on 8:00 a.m. - 4:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Hail can be reached on (571) 272-4485. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



S.L.M.
October 14, 2005

Joseph J. Hail, III
Supervisory Patent Examiner
Technology Center 3700